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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/747,495	SCOTT, JOHAN	
	Examiner	Art Unit	
	Blaine Basom	2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25,28-47 and 50-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *54-56* is/are allowed.

6)☒ Claim(s) *1-20,23-25,28-47 and 50-53* is/are rejected.

7)☒ Claim(s) *21 and 22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

The Examiner acknowledges the Applicant's amendments to claims 1, 10, 16-18, 23-25, 28, 33, 36, 39, and 45-47. Concerning amended claim 1, the Applicant argues that the "Random Roam" mode of Tobey et al. (U.S. Patent No. 5,510,811, hereafter referred to as "Tobey") does not require that each node in a particular direction be moved to by the cursor in a step movement, as is expressed in amended claim 1. The Examiner respectfully disagrees with this argument. It is true that claim 1, in part, expresses that "the focus makes a step movement from one node to another node in response to user actuation." Tobey describes two types of user actuation: a momentary depression of an arrow button, and a sustained depression of the arrow button (see column 7, lines 3-25). In response to a momentary depression of the arrow button, the focus makes a step movement in the direction of the arrow button, whereby as explained in the previous Office Action, this step movement is from one node to another. Thus Tobey in fact presents a focus which makes a step movement from one node to another node in response to user actuation. Admittedly, Tobey further teaches that the cursor moves in a continuous fashion in response to a sustained depression of the arrow button. However, claim 1 does not limit the types of user actuation in which a user may perform to just a single type of actuation, and therefore, Tobey, with two distinct types of actuation, is still considered to teach the features presented in claim 1. Further regarding amended claim 1, the Applicant submits that Tobey does not teach that these nodes are based on the locations of functional display regions, as has been added to claim 1. The Examiner respectfully disagrees with this argument. As described previously, the focus of Tobey makes a step movement from node to node in response to the

momentary depression of an arrow button. It is understood that the user may move the focus to any displayed hotspot, i.e. functional display region, in this manner (for example, see column 7, lines 3-25). For the focus to operate in this manner, it is necessary that at least one node is located on each functional display region. It is therefore understood that the locations and spacing of the nodes is defined based on the locations of the functional display regions. Additionally, regarding claim 1, the Applicant argues that Tobey presents a "tabbing mode" wherein the cursor moves from functional display region to functional display region, instead of from node to node, as is recited in claim 1. However much this "tabbing mode" mode teaches against claim 1 is considered irrelevant, since it is completely separate from the "random roam" mode of Tobey, which as described above, reads on the limitations of claim 1.

Specifically regarding claim 4, the Applicant submits that Tobey does not explicitly present non-equally spaces mesh lines. In response, the Examiner maintains the argument presented in the previous Office Action with respect to claim 4. Tobey particularly states, "...in one screen mode the computer 16 *could* move the cursor a fixed number of pixels each time the user depresses the function control button 14" (emphasis added) (see column 6, lines 32-42). Because of the use of the word "could," Tobey suggests that the cursor need not move a fixed number of pixels each time the user inputs a directional command to move the cursor. As described above, the distance between cursor movements designates the spacing between adjacent lines in the mesh of nodes indicating cursor positions. Consequently, since the cursor need not move a fixed number of pixels, it is understood that the lines making up the mesh may not be evenly spaced.

With respect to claim 11, the Applicant submits that Tobey, from column 2, line 28, through column 10, line 13, does not mention Microsoft® Windows® or the use of multiple meshes, and therefore concludes that Tobey does not teach multiple meshes, as is alleged by the Examiner in the previous Office Action. In response, the Examiner notes that, at column 1, lines 25-41, Tobey describes the Microsoft® Windows® operating system. It is therefore understood that the method of cursor movement, as described by Tobey, may be implemented on a Microsoft® Windows® operating system, the characteristics of which are well known in the art. Consequently, the Examiner maintains the argument presented in the previous Office Action with respect to claims 11-14. Specifically, one of the characteristics of the Windows operating system is that multiple windows may be displayed to the user, whereby as is known in the art, such windows may overlie and underlie each other. It is assumed that each window may be associated with a particular mesh of horizontal and vertical lines delineating cursor movement. Supporting this assumption, Tobey discloses that the above-described fixed incremental distance in which the cursor moves may be based on a particular program, or the contents of the particular program (see column 6, lines 31-42). As previously described, this fixed incremental distance is associated with a mesh, whereby the horizontal and vertical lines in the mesh are spaced according to the fixed incremental distance. Since the Microsoft Windows operating system allows the concurrent execution and display of multiple programs, whereby as is known in the art, each program may associated with a specific window, and since each program may be associated with a particular fixed incremental distance, it is understood that each window on the display screen may be associated with a particular fixed incremental distance, and thus a particular mesh. As is known in the art regarding the Windows operating system, the cursor may

be navigated between windows, and consequently, may be navigated between the particular meshes. Tobey thus teaches the use of multiple meshes. Assuming, for the sake of argument, that the Applicant is correct in the assumption that multiple meshes would not ensue if the method described by Tobey was implemented on a Windows operating system (for which the Examiner does not necessarily agree), the Examiner still maintains that Tobey teaches multiple overlying meshes, and that the focus can be navigated from mesh to mesh. For example, Tobey discloses that a user may zoom in or out, wherein associated with each zoom level, is a fixed incremental distance in which the cursor moves in response to the actuation of an arrow button (see column 6, lines 31-42). As previously described, this fixed incremental distance corresponds to a mesh, whereby the lines in the mesh are spaced according to the fixed incremental distance. As there may exist multiple zoom levels, each associated with a fixed incremental distances, it is understood that there may exist multiple meshes, each associated with a particular zoom level. Tobey therefore teaches multiple meshes, whereby the cursor navigates between meshes by zooming in or out.

Referring to claim 15, the Applicant argues that that the scroll arrow described by Tobey does not constitute the "scroll handle" recited in claim 15. The Examiner respectfully disagrees with this argument. Given the broadest, most reasonable definition of a "scroll handle," - a display region which may be selected to permit scrolling - the scroll arrows of Tobey in fact satisfy such a definition, as they allow scrolling of a page and permit selection of functional display regions not presently displayed, as is described in the previous Office Action. Further regarding claim 15, the Applicant argues that there is no disclosure in the Patent document of

Tobey for providing a node on a position indicator. This point is moot, however, since there is no recitation in claim 15 for providing a node on a position indicator.

As per claims 28-42, the Applicant argues that Tobey does not disclose supplying another individual directional input in moving the focus to a third node disposed within one of the irregularly spaced, functional display regions so as to enable selection of that region. In response, the Examiner maintains that such input may occur via the random roam mode of Tobey, as is shown in the rejection for claim 28 in the previous Office Action. The Applicant further argues that Tobey does not clearly describe a node being disposed at each of the functional display regions, and that instead, each node may be reached by holding down the button and continuously moving the cursor. The Examiner respectfully disagrees with this assumption. The assumption that a node need not be positioned on a display region, meaning that the cursor cannot be positioned on a functional display region by repeated presses of the button, appears to contradict the teachings of Tobey. The whole point of the various cursor movement techniques described by Tobey is to move the cursor to the functional display regions. Thus the technique described by Tobey, in which the user moves a cursor about the screen by repeated presses of an arrow button, would be pointless if it would not result in the cursor being moved to a functional display region. Moreover, it is believed that this method of cursor movement would provide a more fine-grained movement of the cursor than that of continuously holding down the arrow button. It is consequently understood that, since it is more fine-grained, it is necessary that a node exist on each functional display region in order to enable it to be selected.

Regarding claims 7-10, the Applicant argues that the teachings of White et al. (U.S. Patent No. 6,034,689, hereafter referred to as "White"), when combined with Tobey, does not suggest a multimedia network terminal, a set-top box, a mobile telephone, nor a personal computer, which incorporate the amended language of claim 1. The Examiner respectfully disagrees with this argument. For the reasons described above with respect to claim 1, and for the reasons presented in the rejections for claims 7-10 in the previous Office Action, it is understood that White and Tobey in fact teach such a multimedia network terminal, a set-top box, a mobile telephone, and personal computer, as expressed in claims 7-10.

Regarding claim 27, the Applicant submits that there is no specific rejection in the previous Office Action for the claim. In response, the Examiner notes that claims 49 and 27, being similar in language, were combined into a single rejection, as is presented in the previous Office Action.

Referring to claims 19 and 20, the Applicant submits that these claims are not obvious over Tobey, White, and Fries (U.S. Patent No. 6,317,885), as is alleged in the previous Office Action. Particularly, the Applicant argues that there is no discussion in the Patent document of Tobey concerning a mesh, let alone a method for configuring a mesh, which is presented in claim 19. The Examiner respectfully disagrees with this argument. For the reasons described in the rejection for claims 1 and 19, the Examiner submits that Tobey teaches a mesh to one of ordinary skill in the art, and further submits that when combined with White and Fries, teaches a method like that recited in claim 19. Further regarding claims 19 and 20, the Applicant asserts that one of ordinary skill in the art would not consider the teachings of White and Fries, since White is directed to a set-top box and since Fries is directed to a personal computer, whereas claims 19

and 20 are directed to configuring a mesh. The Examiner respectfully disagrees with this argument. Although it is true that White may be directed to a set-top box and that Fries may be directed to a personal computer, both White and Fries are similarly directed to a method, like that of Tobey, which is for displaying content which can be navigated using a remote control-type input device. Thus due to their similar content, it is understood that one of ordinary skill in the art would in fact consider White and Fries. Moreover, Tobey presents a mesh, and as described in the previous Office Action, when combined with White and Fries, teaches a method for configuring such a mesh. Additionally referring to claims 19 and 20, the Applicant states that the Examiner relies upon column 20, lines 23-31 of Fries to support the argument that Fries expresses web pages which undergo a conversion process whereby discrete locations of where the cursor is positioned in response to a user input is predefined, and that this represents a mesh of possible cursor positions. The Applicant concludes that one of ordinary skill in the art would not be motivated to rely upon this short passage in the overall lengthy specification to incorporate the concept therein with the subject matter of Tobey and White, when each of these Patents is directed to different types of devices. The Examiner respectfully disagrees with this argument. Brevity is not necessarily a prerequisite for not teaching a concept or feature. The cited passage of Fries, although short, explicitly teaches a conversion process whereby discrete locations of where the cursor is positioned in response to a user input are predefined. Moreover, Tobey, White, Fries are all similarly directed to a method for displaying content which can be navigated using a remote control-type input device, as is expressed above. Thus it is believed that one of ordinary skill in the art would have in fact been motivated to combine the teachings of Tobey, White, and Fries, especially since Fries provides ample motivation to modify the

teachings of Tobey and White, as is shown in the previous Office Action. Regarding this motivation, the Applicant submits that such motivation is improper. The Examiner respectfully disagrees with this argument; Fries explicitly provides motivation to modify a method, like that of Tobey and White, as is shown in the previous Office Action. Again regarding claims 19 and 20, the Applicant asserts that that Fries does not clearly and unambiguously described the method steps recited in claim 19. The Examiner agrees with this assertion, but submits that it is moot since the rejection in question is a 35 U.S.C. 103 rejection, NOT a 35 U.S.C. 102 rejection. In other words, the *combination* of Tobey, White, and Fries is depended upon to teach the method steps recited in claim 19, not just Fries. The Applicant particularly submits that there is no disclosure in Fries concerning determining minimum and maximum values. However, as shown in the previous Office Action, the combination of Tobey, White, and Fries teaches determining minimum and maximum values. Regarding this teaching presented in the previous Office Action, the Applicant contests the Examiner's assertion that a cursor would be placed at the center of a functional display region, stating that such cursor placement is not relevant to the methodology presented in claim 19, and that placing a cursor in the middle of a functional display region would obscure any text displayed within the region. The Examiner respectfully disagrees with such arguments. The placement of a cursor at the center of a functional display region necessitates a node at the center of the display region, since as described above, cursor locations are defined by nodes. As further described above, each node defines a set of horizontal and vertical mesh lines intersecting the node, and as described in the previous Office Action, determining such a node at the center of a functional display region necessitates finding the maximum and minimum values along the horizontal and vertical directions of the functional

display region. Such cursor placement is therefore relevant to the methodology presented in claim 19. Additionally, the Examiner asserts that the placement of a cursor at the center of a functional display region would not obscure any text displayed within the functional display region, and that in fact, such cursor placement is performed in the prior art. For example, U.S. Patent No. 6,137,487, to Mantha, which was presented in form PTO-892 with the previous Office Action, teaches placing a cursor at the center of a button within which is displayed text (see step "606" in figure 6A). As only the tip of the cursor is placed at the center, no text is obscured by the pointer (for example, see figure 5C of Mantha). Also with respect to claims 19 and 20, the Examiner presents U.S. Patent No. 6,034,684 to Proehl et al., which as shown below, teaches a method like that of claims 19 and 20, which is for configuring a mesh. It is particularly noted that the presentation of this additional rejection is not done in response to the Applicant's arguments, but is done to further show that the method recited in claims 19 and 20 is taught by the prior art.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 10-18, 23-25, 28-42, 45-47, and 50-53 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,510,811, which is attributed to Tobey et al. (and hereafter referred to as "Tobey"). In general, Tobey presents an apparatus and method whereby a hand-held controller, like that used for a television, is used to navigate a cursor about a computer display (see column 2, line 42 – column 3, line 7). Tobey discloses that this cursor is thus used to select "hotspots," which are display regions representative of computer functions (see column 2, lines 47-56). Consequently, it is understood that Tobey teaches a generating device configured to generate signals for a graphical display in which a focus, specifically a cursor, can be navigated between spaced, functional display regions such that they are individually selected when the focus is moved thereto.

With respect to claim 1, Tobey describes a "Random Roam mode," whereby a user uses the above-described hand-held controller to cause the cursor to move in one of four possible directions in a "uniform incremental manner" (see column 7, lines 3-25). The user may specifically move the cursor up, down, left, or right, as defined by a Cartesian coordinate system (see column 2, lines 59-65). Consequently, it is understood that from a given point on the display, and in response to the actuation of a direction on a "four direction control button" on the hand-held controller, the cursor moves a set distance up, down, left, or right to a new point on the

screen. From this new point, the user may again move the cursor a set distance up, down, left, or right to another point on the screen by actuating the direction on the four direction control button. Such user input is repeated to position a cursor on a hot spot. Thus the user moves the cursor in incremental step movements about the screen in order to position the cursor on hotspots and consequently select computer functions. Specifically regarding the claimed invention, it is therefore understood that these incremental step movements are defined by a Cartesian coordinate system of intersecting vertical and horizontal lines, the distance between each of the horizontal and each of the vertical lines being the above-described set distance. Moreover, it is understood that the intersections of these vertical and horizontal lines define the possible screen positions of the cursor. These possible screen positions are consequently considered "nodes," like those recited in claim 1. It is understood that the user may move the focus to any displayed hotspot, i.e. functional display region (for example, see column 7, lines 3-25). For the user to be able to move the focus to any hot spot, it is necessary that at least one node is located on each hot spot. It is therefore understood that the locations and spacing of the nodes is defined based on the locations of the hot spots. Tobey thus teaches a plurality of spaced nodes defined based on the locations of functional display regions, and configured so that the cursor makes a step movement from one node to another thereof in response to user actuation, the nodes being arranged in a mesh at the intersections of a first set of spaced lines extending in a horizontal direction and a second set of spaced lines extending in a vertical direction, the functional regions, i.e. hotspots, being irregularly disposed in the display and at least one of the nodes being disposed at each of the regions respectively.

Regarding claim 2, the above-described hand-held controller includes a four-direction control button, which allows the user to move the cursor in four possible directions: up, down, left, and right (see column 2, lines 59-65). As described above, the cursor moves to a set node as defined by a Cartesian coordinate system of intersecting vertical and horizontal lines, i.e. a "mesh." The hand-held controller disclosed by Tobey is thus considered a user operable navigation control device, which provides actuation to move a focus from one node to another in a mesh, the navigation device including a first control to move the focus in a first predetermined direction and a second control to move the focus in a second predetermined direction. Specifically, these first and second controls are comprised in the four-direction control button.

In reference to claim 16, Tobey teaches a method of navigating a focus between spaced hotspots in a device, wherein as shown above, this device is of the type configured to generate signals for a graphical display in which a cursor can be navigated between hotspots such that they are individually selected when the cursor is moved thereto, with a plurality of spaced nodes defined based on the locations of the hotspots, and configured so that the cursor makes a step movement from one node to another thereof in response to user actuation, the nodes being arranged in a mesh at the intersections of a first set of spaced lines extending in a horizontal direction and a second set of spaced lines extending in a vertical directions, the hotspots being irregularly disposed in the display and at least one of the nodes being disposed at each of the hotspots respectively, the device including a user operable hand-held controller to provide the user actuation to move the cursor from one node to another in the mesh, and the hand-held controller including a first control to move the focus in a horizontal direction and a second control to move the focus in a vertical direction. Moreover, Tobey teaches inputting into this

hand-held controller a movement command corresponding to movement along the horizontal direction (see column 2, lines 57-65), whereby in response, it is interpreted that the cursor steps from a first node to a second node displaced from the first node along the horizontal line (see column 7, lines 3-15).

As per claim 3, the Random Roam mode described by Tobey allows a user move a cursor in incremental steps, wherein as described above, these incremental steps are defined by a mesh of horizontal and vertical lines. Thus, as apposed to a "Tabbing mode" which causes the cursor to jump from one hotspot to the next, this Random Roam mode allows the cursor to be displayed at positions, i.e. nodes, between hotspots (see column 7, lines 3-25). Tobey therefore teaches that at least one of the nodes is disposed outside of the hotspots, i.e. regions.

As per claims 4 and 50-52, Tobey discloses an alternative method for moving the cursor in incremental step movements about the display (see column 6, lines 5-31). Regarding this alternative method, Tobey states, "...in one screen mode the computer 16 *could* move the cursor a fixed number of pixels each time the user depresses the function control button 14" (emphasis added) (see column 6, lines 32-42). Because of the use of the word "could," Tobey suggests that the cursor need not move a fixed number of pixels each time the user inputs a directional command to move the cursor. As both the above-described Random Roam mode and this alternative mode are used to move the cursor about the display via incremental step movements, it is understood that this same idea applies to the above-described Random Roam mode. As described above, the distance between cursor movements designates the spacing between adjacent nodes, and consequently, adjacent lines in the mesh of nodes indicating cursor positions. Consequently, since the cursor need not move a fixed number of pixels, it is understood that the

nodes and lines making up the mesh may not be evenly spaced. Since, as described above, the mesh lines are organized in a Cartesian coordinate system of intersecting horizontal and vertical lines, it is therefore further understood that members of the set of lines extending in the horizontal direction may be spaced from one another along the vertical direction with differing degrees of separation. Similarly, it is understood that members of the set of lines extending in the vertical direction may be spaced from one another along the horizontal direction with differing degrees of separation.

Regarding claim 5, the functional display regions, i.e. hotspots, disclosed by Tobey are associated with a region displayed on the display. For example in figure 3A, reference numbers 40, 42, 44, 46, and 48 each designate a hotspot. As shown in figure 3A, each of these hotspots is associated with a rectangular-shaped region displayed on the display.

With respect to claim 6, Tobey discloses that the "computer-controlled display" is used to display the above-described hotspots and cursor (see column 3, lines 27-59). Consequently, it is understood that the device disclosed by Tobey has a display device coupled thereto so as to provide a graphical display.

Regarding claim 10, the above-described Random Roam mode of Tobey is implemented with a computer (see column 3, lines 27-55). It is interpreted that this computer may be a personal computer (see column 1, lines 13-45). Consequently, such a personal computer implementing the above-described Random Roam mode of Tobey is considered a personal computer like that recited in claim 10.

Concerning claims 11-14, it is interpreted that the above-described Random Roam mode may be employed on a Windows operating system (see column 1, lines 25-41). As is known in

the art, one of the characteristics of the Windows operating system is that multiple windows may be displayed to the user, wherein such windows may overlie and underlie each other. Moreover, it is understood that the above-described mesh of intersecting horizontal and vertical lines, which defines node positions, is associated with a window. Consequently, it is understood that with the above-described Random Roam mode employed on a Windows operating system, a mesh of nodes would be associated with each window displayed on the display. In other words, if a second window is displayed, additional nodes would be arranged in a second mesh at the intersections of a third set of spaced lines extending in a horizontal direction and a fourth set of spaced lines extending in a vertical direction, whereby this second mesh is associated with the second window. As is known in the art regarding the Windows operating system, the cursor may be navigated between this first and second window, and consequently, may be navigated between this first and second mesh. As the first and second window may overlie or underlie each other, it is understood that the meshes associated with these windows similarly overlie or underlie each other. Moreover, it is understood that the horizontal lines of the two meshes extend in the same direction, and the vertical lines of the two meshes extend in the same direction.

In reference to claim 17, Tobey teaches a method of navigating a cursor from one mesh to another in a device, wherein as shown above, this device is of the type configured to generate signals for a graphical display in which a cursor can be navigated between hotspots such that they are individually selected when the cursor is moved thereto, with a plurality of spaced nodes defined based on the locations of the hotspots, and configured so that the cursor makes a step movement from one node to another thereof in response to user actuation, the nodes being

arranged in a mesh at the intersections of a first set of spaced lines extending in a horizontal direction and a second set of spaced lines extending in a vertical direction, the hotspots being irregularly disposed in the display and at least one of the nodes being disposed at each of the hotspots respectively, and also, the device having additional nodes arranged on another mesh at the intersections of a third set of spaced lines extending in a horizontal direction and a fourth set of spaced lines extending in a vertical direction, the cursor being navigable between the meshes. In particular, each of these meshes is associated with a window, as is described above. It is interpreted that a user may navigate the cursor from one window to another, and thus navigate the cursor from one mesh to the another, by navigating the focus to a node on one mesh adjacent to another mesh and inputting into the hand-held controller a device movement command corresponding movement off of the mesh in the direction of the other mesh.

In reference to claim 15, Tobey discloses that a user may scroll a file vertically by moving the cursor onto the up or down arrows of a scroll bar using the above-described Random Roam mode (see column 7, lines 49-65). Consequently, it is interpreted that a node exits on such up and down arrows for the cursor to be positioned at. Moreover, these up and down arrows are each considered a "handle," like that recited in the present application. Tobey therefore teaches a node disposed on a handle of a scroll bar so as to allow scrolling of a page and permit selection of functional display regions not presently displayed.

In reference to claim 18, Tobey teaches a method of navigating a focus between spaced hotspots in a device, wherein as shown above, this device is of the type configured to generate signals for a graphical display in which a cursor can be navigated between hotspots such that they are individually selected when the cursor is moved thereto, with a plurality of spaced nodes

defined based on the locations of the hotspots, and configured so that the cursor makes a step movement from one node to another thereof in response to user actuation, the nodes being arranged in a mesh at the intersections of a first set of spaced lines extending in a horizontal direction and a second set of spaced lines extending in a vertical directions, the hotspots being irregularly disposed in the display and at least one of the nodes being disposed at each of the hotspots respectively, the device further having a node disposed on a handle of a scroll bar so as to allow scrolling of a page and permit selection of functional display regions not presently displayed. Since the cursor is positioned on this handle by moving the cursor in step-wise fashion from node to node towards the scroll bar, as is shown above, it is understood that Tobey teaches navigating the cursor to a node on the mesh adjacent to the node disposed on the handle of the scroll bar and inputting into the user operable navigation device a movement command corresponding to movement off of the mesh and onto the node disposed on the handle of the scroll bar.

In regard to claims 23-25, Tobey teaches a method of navigating a cursor between spaced hotspots in a device, wherein as shown above in the rejection for claim 1, a plurality of spaced nodes are defined based on the locations of the hotspots, and configured so that the cursor makes a step movement from one node to another thereof in response to user actuation, the nodes being arranged in a mesh at the intersections of a first set of spaced lines extending in a horizontal direction and a second set of spaced lines extending in a vertical direction, the hotspots being irregularly disposed in the display and at least one of the nodes being disposed at each of the hotspots respectively. Moreover, Tobey discloses that this method may be implemented in an application program (see column 3, lines 56-64). A computer implementing such an application

program is considered a computer program product like that recited in claim 24. Additionally, and in regard to claim 25, such an application program itself is considered a computer program like that expressed in the claim. As this application program is executed on a computer, it is understood that is must be embodied on some sort of computer-readable medium.

Concerning claims 28 and 33, Tobey teaches a method, of navigating a cursor between irregularly spaced functional display regions, referred to as "hotspots." Similarly, Tobey also teaches a method of operating a display generating device configured to provide a graphical display in which a cursor can be navigated between hotspots. For example, Tobey discloses supplying an individual directional input via a four-direction control button on a hand-held controller (see column 2, lines 59-65). In response to this directional input, Tobey further discloses that a cursor is moved from a first node to a second node, which are defined based on the locations of the hotspots, in a predefined discrete step along a direction corresponding to the directional input, the second node being disposed between the irregularly spaced hotspots, as is shown above particularly in the rejection for claim 1. It is understood such user input is repeated in order to move the cursor about the display and focus on a hotspot (see column 7, lines 3-25). Thus Tobey further teaches supplying another directional input and moving the focus to a third node disposed within one of the irregularly spaced hotspots so as to enable selection of the hotspot.

As per claims 29 and 34, Tobey teaches arranging the nodes in a mesh, or in other words, at the intersections of a first set of spaced lines extending in a horizontal direction and a second set of spaced lines extending in a vertical direction, as is shown above in the rejection for claim 1.

Regarding claims 30 and 35, the above-described Random Roam mode disclosed by Tobey is used to move a cursor from hotspot to hotspot via incremental movements. As described above, the position of the cursor after each incremental movement is considered a node. For every directional input by the user, there is an inherent determination as to where to position the cursor, or in other words, as to which node to place the cursor. For example, for a user to move a cursor to a particular hotspot, the user intrinsically determines after each incremental movement whether the cursor is positioned on the particular hotspot, i.e. whether the node defining the location of the cursor is disposed within the particular hotspot. If not, the user continues input directional inputs in order to move the cursor to the hotspot. As shown above in the rejection for claim 5, each such hotspot is associated with a segment of the graphical display. Therefore, Tobey teaches determining whether a node is disposed within an irregularly spaced functional display region, i.e. a hotspot, and equivalently, whether the node is located within a predefined segment of the display. It is understood that if the cursor were not in fact located in the hotspot, it would be positioned in one of the nodes outside of the hotspot, which as described above, define the discrete cursor steps. Thus Tobey further teaches that in the absence of a node disposed within a hotspot, a node is provided at a predefined discrete step along a direction corresponding to the user's directional input and the cursor is moved to that node.

With respect to claims 31 and 32, the above-described Random Roam mode disclosed by Tobey is used to move a cursor from hotspot to hotspot via incremental movements. As described above, the position of the cursor after each incremental movement is considered a node. Since the cursor may moved off of a hotspot, it is understood that in such a case, a user moves a cursor from a first node, wherein this first node is within an irregularly spaced hotspot,

i.e. functional display region. Similarly, it is understood that the cursor may be moved onto a hotspot. In such a case, the cursor to makes a step movement from a node on one of the hotspots to a first node in response to an individual directional input from the user, wherein this first node is not within one of the hotspots.

In regard to claim 36, Tobey teaches a method comprising: a plurality of spaced nodes defined based on the locations of hotspots; an individual directional input; moving a cursor from a first node to a second node in a predefined discrete step along a direction corresponding to the directional input, the second node being disposed between the irregularly spaced hotspots; receiving another directional input; and moving the cursor to a third node disposed within one of the irregularly space hotspots so as to enable selection of the hotspot, as is shown above in the rejection for claims 28 and 33. It is understood that this method is implemented with a computer coupled to a hand-held controller, which is used to receive directional inputs (see column 2, line 57 – column 3, line 7). Moreover, it is understood that the computer includes a CPU which is ultimately responsible to presenting the graphical display, and more specifically the movement of the cursor on the display (see column 3, lines 27-41). This computer implementing the above-described method of Tobey is thus considered a "display generating device" like that recited in claim 36, wherein the display generating device is configured to generate signals for a graphical display in which a cursor can be navigated between irregularly spaced hotspots on a display device, the device comprising: a first input device, namely the hand-held controller, which is for supplying an individual directional input; a first controller, namely the CPU, which is for moving the cursor from a first node to a second node in a predefined discrete step along a direction corresponding to the directional input, the second node being disposed between the irregularly

spaced hotspots; a second input, namely the hand-held controller, which is for supplying another directional input; and another controller, namely the CPU, which is for moving the cursor to a third node disposed within one of said irregularly space hotspots so as to enable selection of the hotspot.

In regard to claims 46 and 47, Tobey presents a device configured to generate signals for a graphical display, wherein as described in the previous paragraph, a cursor can be navigated between irregularly spaced hotspots on a display device, the device comprising: a plurality of spaced nodes defined based on the locations of hotspots; a first input device for supplying an individual directional input; a first controller for moving the cursor from a first node to a second node in a predefined discrete step along a direction corresponding to the directional input, the second node being disposed between the irregularly spaced hotspots; a second input for supplying another directional input; and another controller for moving the cursor to a third node disposed within one of said irregularly space hotspots so as to enable selection of the hotspot. More specifically, Tobey discloses that this device may be implemented as a computer (see column 3, lines 27-55). Such a computer is considered a computer program product like that recited in claim 46. In addition, Tobey discloses that such means for moving a cursor about the display may be employed using an application program (see column 3, lines 56-64). Consequently, and specifically regarding claim 47, such an application program itself is considered a computer program like that expressed in the claim. As this application program is executed on a computer, it is understood that is must be embodied on some sort of computer-readable medium.

Concerning claim 37, the above-described first and second controllers are implemented via a single CPU, as is shown above. Consequently, the first and second controllers are considered unitary.

As per claim 38, the above-described first and second inputs for supplying the individual directional inputs are realized by Tobey via a hand-held controller. Specifically, this hand-held controller includes a four-direction control button for receiving the directional inputs (see column 2, lines 57-65). Thus the first input for supplying the individual directional input comprises a user operable navigation control, specifically, this four direction control button.

In regard to claim 39, the above-described first and second inputs for supplying directional inputs are both realized by Tobey via a single hand-held controller comprising a user operable navigation control, specifically a four direction control button, as is described above in the previous paragraph. Thus, the first and second inputs are considered unitary.

Regarding claim 40, the functional display regions, i.e. hotspots, disclosed by Tobey are associated with a region displayed on the display. For example in figure 3A, reference numbers 40, 42, 44, 46, and 48 each designate a hotspot. As shown in figure 3A, each of these hotspots is associated with a rectangular-shaped region displayed on the display.

In regard to claim 41, the above-described computer disclosed by Tobey is used to move a cursor from hotspot to hotspot via incremental movements. As described above, the position of the cursor after each incremental movement is considered a node. Since the cursor may moved off of a hotspot, it is understood that in such a case, a user moves a cursor from a first node, wherein this first node is within an irregularly spaced hotspot, i.e. functional display region.

With respect to claim 42, Tobey discloses that the "computer-controlled display" is used to display the above-described hotspots and cursor (see column 3, lines 27-59). Consequently, it is understood that the device disclosed by Tobey has a display device coupled thereto so as to provide a graphical display.

Regarding claim 45, the above-described Random Roam mode of Tobey is implemented with a computer (see column 3, lines 27-55). It is interpreted that this computer may be a personal computer (see column 1, lines 13-45). Consequently, such a personal computer implementing the above-described Random Roam mode of Tobey is considered a personal computer like that recited in claim 45.

As per claim 53, Tobey discloses that the display screen may operate in a "magnified mode," whereby it is interpreted that items displayed on the screen appear enlarged. Via such a magnified mode, it is understood that a hotspot displayed on the screen may be expanded.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,034,684, which is attributed to Proehl et al. (and hereafter referred to as "Proehl"). In general, Proehl presents a method for displaying and navigating data items (see column 2, lines 2-39). Regarding the claimed invention, Proehl discloses that such a data item, or a group of

such data items, may be replaced by a single "landmark" item, which is intersected by a vertical and a horizontal line (see column 3, lines 42-51). It is understood that the landmark item, and consequently the horizontal and vertical line, is positioned at or near the center of the group of data items in which it replaces (for example, see the group of data items, reference number 102, in figure 1; and see the landmark item, reference number 110 in figure 2, which replaces this group of data items). Thus, it is understood that the minimum and maximum co-ordinate values in both the horizontal and vertical directions are determined for the group of data items, i.e. functional display region, and that an intermediate coordinate value, particularly a mean value of this maximum and minimum co-ordinate value, is ascertained in order to determine the location to place the landmark item. By replacing each group of data items with its corresponding landmark item, a mesh is generated (for example, see figure 6). Proehl is thus considered to teach a method, like that of claims 19 and 20, which is for configuring a mesh.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7-9 and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobey, which is described above, and also over U.S. Patent No. 6,034,689, which is attributed to White et al. (and hereafter referred to as "White"). As described above, Tobey presents a device configured to generate signals like those recited in claims 7-9 and 43-44. More specifically, it is interpreted that this device is associated with a personal computer (for example, see column 1, lines 13-44). Consequently, Tobey does not explicitly disclose that the device is included in a multimedia network terminal, a set top box for a television, or a mobile station, as is expressed in claims 7, 8, 9, 43, and 44.

Like Tobey, White discloses a method and system whereby a user users a hand-held controller to move a focus about a display. More specifically, White presents a system by which a television is used to display web pages to a user, wherein the user uses a remote control to select hyperlinks in the web pages (see column 2, lines 52-64). Regarding the claimed invention, White discloses that this television comprises a "WebTV box" to generate and display the web pages to the user (see column 4, lines 45-54). This WebTV box is considered a set top box like that recited in claim 8. Because it is understood that the web pages provided by the television comprise multimedia network information, as is known in the art, the system disclosed by White is also considered a multimedia network terminal, like that recited in each of claims 7 and 43.

Lastly, because it is understood that this television is moveable, the system of White is also considered a mobile station like that expressed in each of claims 9 and 44.

It would have been obvious to one of ordinary skill in the art, having the teachings of Tobey and White before him at the time the invention was made, to modify the method taught by Tobey such that it may also be implemented with a television to move a cursor about a web page displayed by the television, as is done by White. It would have been advantageous to one of ordinary skill to utilize such a combination because, as is demonstrated by White, a television is a device which may require input to move a focus about the display, similarly to that done on a computer. Tobey provides an effective method for moving such a focus. Lastly, it is interpreted that with such a combination, the computer program responsible for positioning the cursor on the web page is associated with the web page. In other words, it is interpreted that along with the web page, this computer program is down-loaded from a server and stored in a store associated with a computer coupled to the television.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the above-described combination of Tobey and White, and also over, U.S. Patent No. 6,317,885, which is attributed to Fries. As shown above, the combination of Tobey and White teaches a method whereby a user uses a remote control to move a cursor in discrete steps about Internet web page displayed by a television screen. Tobey particularly teaches that these discrete positions of the cursor are defined by a mesh of interesting horizontal and vertical lines, as is described above in the rejection claim 1. As shown above, the distance between these vertical and horizontal lines, and consequently the distance between the nodes of possible cursor

positions located at the intersections of these vertical and horizontal lines, is denoted by the distance the cursor moves in response to an input provided by the user. In other words, the mesh disclosed by Tobey is implicitly configured; it is configured at run time given a default cursor position and the distance the cursor moves in response to an input from the user. Consequently the combination of Tobey and White does not teach explicitly configuring the mesh as is done in the presently claimed invention. In other words, the combination of Tobey and White does not teach determining minimum and maximum co-ordinate values along a predefined direction for a first functional display region, determining minimum and maximum co-ordinate values along a predetermined direction for a second functional display region, obtaining an intermediate co-ordinate value in dependence on these values and providing a mesh line defined by this median co-ordinate value.

Like the above-described combination of Tobey and White, Fries presents a method whereby a television presents Internet web pages to a user and the user uses a remote control to move a focus about the television and select various hyperlinks (see column 2, lines 19-37 and column 6, lines 35-55). Regarding the claimed invention, Fried expresses that such web pages undergo a conversion process whereby the discrete locations of where the cursor is positioned in response to a user input is predefined (see column 20, lines 23-31). In other words, a mesh of possible cursor positions is explicitly configured prior to being displayed.

It would have been obvious to one of ordinary skill in the art, having the teachings of Tobey, White, and Fries before him at the time the invention was made, to modify the method taught by Tobey and White such that Internet web pages displayed on the television are analyzed prior to being displayed in order to determine the plurality of possible cursor positions existing

on the web page. It would have been advantageous to one of ordinary skill to utilize such a combination because, as is disclosed by Tobey, this reduces the amount of processing that needs to be performed at the television (see column 20, lines 23-31). It is interpreted that with the method of Tobey and White, the cursor may be positioned on any hyperlink in a given web page. Moreover, for aesthetic reasons and to aid user comprehension, it is understood that this cursor is placed at the center of each hyperlink. It is therefore understood that when analyzing a given web page to create a mesh of possible cursor positions, as is done by the above-described combination of Tobey, White, and Fries, it is required to create a node at the center coordinate of each hyperlink in the web page. This is done by determining the minimum and maximum values along the horizontal direction for each hyperlink and the minimum and maximum values along the vertical direction for each hyperlink, and from these values, obtaining the center coordinate using of the hyperlink. More specifically, this is done by taking the mean values of the minimum and maximum coordinates for each hyperlink. These nodes at the center coordinate of each hyperlink thus define a horizontal and vertical mesh line through the node. For these reasons, the above-described combination of Tobey, White, and Fries teaches: determining minimum and maximum co-ordinate values along a predefined direction, specifically a horizontal direction, for a first functional display region, specifically a hyperlink; determining minimum and maximum co-ordinate values along a predetermined direction, specifically a vertical direction, for a second functional display region; obtaining an intermediate co-ordinate value in dependence on these values and providing a mesh line defined by this median co-ordinate value. Moreover, it is understood that the above-described combination thus teaches determining a mean value of the maximum and minimum coordinate values for the hyperlink.

Allowable Subject Matter

Claims 21 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is an examiner's statement of reasons for allowance:

Claims 21 and 22 are considered allowable for the reasons presented in the previous Office Action.

Claims 54-56 are allowed. The following is an examiner's statement of reasons for allowance:

Claim 54 is considered allowable for the reason in which claims 21 and 22 are considered allowable. Essentially, the prior art does not teach configuring a mesh in which there exists a determination of regions which overlap along a predetermined direction, and then providing an overlap line for each region. As claims 55 and 56 depend on claim 54, and include all of the limitations recited in claim 54, claims 55 and 56 are considered allowable for the reasons in which claim 54 is considered allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. The applicant is required under 37 C.F.R. §1.111(C) to consider these references fully when responding to this action. The Falcon U.S. Patent cited therein presents a method for position a cursor on a display screen wherein the position of the cursor is dependent upon a coordinate system, similar to the mesh of the present application.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blaine Basom whose telephone number is (703) 305-7694. The examiner can normally be reached on Monday through Friday, from 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (703) 308-3116. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

btb

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